75

Index
1 leaf to letter

W. Osler Esq

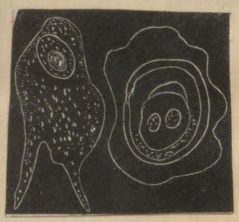
University College

Toronto

Jan 1st 1870

A B C D E F G H J K L M N O P R S T U V W Y Z

Notes on 1870
on animal Parasites etc.



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G
H
J
K
L
M
M'
N
O
P
R
S
T
U
V
W
Y
Z

Entozoa in Fowl. p 274
" " " Dory p 276 & 250
" " " Bar-fish p 278
" " " Cat p 280
" " " Lynx p 282
" " " Rat p 284
" " " Beaver Fish (Amia calva) p 286

11

Fish examined with negative results. p 453

Gatherings

(Diatomaceæ) p

(Desmidiæ) p

(Infusoria) p

H
J
K
L
M
M'
N
O
P
R
S
T
U
V
W
Y
Z

Polyzoa p

P
R
S
T
U
V
W
Y
Z

I

20/3/70

Went out to Humber Bay with Rev W. A. S. and obtained gatherings from Grenadier Pond and its outlet

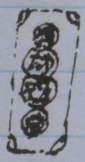
24/3/70. Went out again and obtained another gathering from the same places. The Diatoms were all alive and moving freely. Many strips of Oscillatoria were mingled with them and gave the gathering a rather greenish appearance. From the Pond on the right hand side of the bridge the following Diatoms were obtained

Cymbella Ehrenbergii, Cocconeis thwaitesii, Pinnularia gibba, Navicula affinis, Diatoma elongatum, " " distans, Pinnularia major, Stauroneis anceps, Cocconema lanceolatum, Nitzschia sigmoidea, " " linearis, Navicula rhombica, Navicula lanceolata, Navicula crassinerva, Epithemia sorex, Stauroneis punctata, Surirella angusta; Cymbella cuspidata, Navicula inflata, Cocconema cymbiforme, Achnanthes exiliatum, Cocconema cistula, Gomphonema geminatum, Gomph. acuminatum, Diatoma vulgare

a curious Rhizopod?. outer line the clear protoplasm the inner the boundary of the lorica

Encysted young Diatoms, probably Coscinodiscus. they exhibit distinct movement in their cysts, and often assume a vertical position

In this three cysts are seen

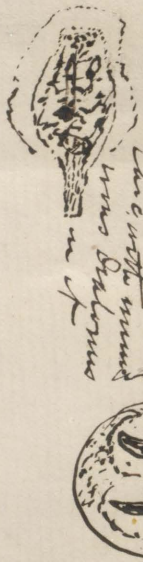


Navicula affinis, when first seen the endochrome was rolled up into four balls, in a few minutes the middle ones coalesced, and enlarging pressed the end ones against the apices. Seen with 1/20

21/4/70 out at Preston, In a gathering from the S.T. Railway numbers of Nitzschia amphioxys and Meridion circul are

Gruadierpond 23/3/70

Cymbella Ehrenbergii
Cocconeis Thwaitesii
Pinnularia gibba
Navicula affinis
Diatoma elongatum
Pinnularia ~~perlongus~~ distans
" " major
Stauroneis anceps
Cocconema lanceolata
Nitzschia sigmoidea
Stauroneis linearis
Navicula rhomboide
" lanceolata
" crassinerva
Epithemia zebra
Stauroneis punctata
Surirella angusta 1/20
Hormid protrusion of endochrome
of Pinnularia gibba 1/20



a curious Diatom! S. abundance where the clean sections 1/20 its upper half has large granules with a central summit

The upper one moved slightly on to cell and showed a twisted position, but in the two cells represented in this we have cells are seen

warty, nodulo, fibrous S. W.

Epithemia zebra a very abundant form of Diatom a few smaller radial bars 1/20 granules

The endochrome in this is rolled up into four balls the middle one the largest two centre ones coalesced, and spread themselves while watching it. throughout the cell ~~[illegible]~~ possessing the smaller ones sy- mmetrical the apices. this was in Nav. affinis and seen with 1/20 2/4/70

Humber Pond 23/3/70

Cymbella cuspidata
Navicula inflata

Cocconema cymbiforme
Achnanthes exilis
Cocconema cistula
Gomphonema geminatum
" " acuminatum

Dialonia vulgaris

In this gathering from the Humber Pond several infusoria coloured an ochre brown, probably from the eating the brown coloured fungus cospora

W

Entozoa

Entozoa in Dog

19/2/69

I

From a young slut; three or four Tænia elliptica, two Bothriocephalus cordatus (Slide) and a number of ascaridæ. This animal had been about a butcher's shop

II

22/1/70

From a slut, six months old, also got from a butcher's shop. 39 Tænia elliptica, 25 Ascaris. In this dog, there was but one species of Tænia. The Tænia are collected towards the ileum, while the ascaridæ are usually in the duodenum & beginning of jejunum. Of the 39 Tænia I obtained 18 with heads, the others came away without, breaking off close to the head. Besides the strobilæ, there were numberless mature proglottides; the eggs contained in these exhibited distinctly the six-hooked embryos = proscolices

Slides No's , of heads; No's , of ova

7/2/70 No III

From a terrier pup about a year old, four ascaridae.
No Tania at all

IV.

4/3/70 From a dog about a year old, which had on a former occasion 1/3/70 been fed with flesh from Case IV p 212.
4 Ascaris and four Tania elliptica all with heads were obtained. No Trichinae were found either in the intestines or in the muscles, but on examining the kidneys six or seven small white spots were seen about ⅛ that size (See slide) in each of these ~~was seen~~ a small Nematode worm was observed not coiled up, and looking exceedingly like a Trichina spiralis

V

14/4/70 From a pup about four months old, which had previously been fed with Trichina. 3 ascaris were obtained

14/2/76 Examined a pure St-Bernard dog. No entozoa

Entozoa in Bat

15/11/69

Obtained a curious encysted Nematode from the walls of the stomach of the New-york Bat

There were no other Entozoa, either free in stomach & intestines or encysted in the muscles

There were eight altogether, Slides No , See drawing

Entozoa in Cat-Fish

12/5/69

Procured two small Taniæ from intestine, length about half an inch; head devoid of hooklets

7/5/70 From a cat-fish caught in the canal 10 Taniæ were obtained. This cestode is from 1/4 to 1/2 an inch in length and very extensible. Suctorial disks prominent; can be seen with the naked eye they are four in number; no hooklets were seen. The water vascular system is beautifully seen in this species at the head it may be seen terminating in a plexus (whose branches are as large as the primary trunks) situated between the disks

Two Distomes were also found in the intestine

Encysted Nematodes in the liver

a Cysticercus in the Kidney

29/5/70

From the intestines of cat-fish speared at the Island. 3 Taniæ very small and 4 Echinorynchide (see ch de at W.a.N.) accessory claspers of the male well seen in

Entozoa in Pig

5/6/69

Obtained from Dr Maddock of Hamilton a small portion of the heart of a measley pig; contained about a dozen of Cysticercus Cellulosa. See Slides 110

Entozoa in Man

7/2/68

Trichina spiralis I

Obtained a peice of muscle from a man who died of the disease in Illinois State, very numerous not encysted, Two families living on different flats of the same house bought a barrel of Pork between them, one flat cooked the pork and escaped the disease, the other eat them raw and nine were sickened; of these nine, four died

27/2/69 II

The family of a Mr Getz in Hamilton consisting of himself, wife & daughter, partook of an uncooked ham all three were laid up with the disease, Mrs Getz died first; in her the parasites were numerous & unencysted, Mrs Getz died some two weeks after her daughter in her they were just beginning to be encysted. The husband was attacked but not so severely and escaped. most probably from being drunk for some days at the commencement of the attack, See Slides No's

20/2/69 III

Obtained a peice of muscle from a woman

in New-York. In her the disease was not suspected during life, the students on dissecting the body found (as in the original discovery of the parasite) great difficulty in cleaning the muscles, and on examination they were found to be packed with Trichinæ, all encysted. See Slides Nos

22/2/70 IV

While dissecting the arm of a man, who had died at the Toronto General Hospital, I found numerous Trichinæ in the Biceps muscle and further examination shewed them to be scattered pretty freely throughout the muscles. From 3i of the muscle from the beginning of the long head of Biceps I obtained 150 cysts, the greater number of them containing healthy looking Trichinæ

29/3/70 V

In the subject following the one above, and also brought from the Toronto General Hospital, numberless cysts were found in all parts of the body. The parasites in this case are not as old, none of them beginning to undergo degenerat-

Entozoa in Man

Tænia solium 15/3/68

In fat passed by a bank-clerk a patient of Dr Russell's. See slides No's

23/2/71 Tænia mediocanellata. Obtained three specimens of this cestode from a man (Earle) who died of heart disease in Montreal Gen Hospital. He stated during life that he had been suffering from tape worm for 14 years got it at Matta while stationed there with his regiment. He stated that he had been under treatment for it innumerable times & had passed many yards of the worm. While in Hospital during the end of last year & the beginning of this he was treated with the male shield fern, which brought away several long portions. In opening the small intestines the worms were found extending from the lower part of the duodenum, through the jejunum & seeming completely to fill the intestine in the empty condition. The heads were all within 1½ inch of each other & deeply imbedded in the mucous mem

brane, between the valvulæ conniventes. The bodies were convoluted & twisted, extending down the intestine for about 3 ½ feet, & lower down in the bowel several detached portions were found consisting of from sixteen to eighteen proglottides. The worms still retained some little vitality, but the movements were very feeble. While in the intestine, the water-vascular system in one of the worms beautifully seen, extending up each side of the worm. The length was of each respectively 76, 50 & 65 inches & the number of segments contained in each to between 275 & 350, falling at least 100 short in the longest one of the fully mature sexual segments. This however is not to be wondered at as this not more than six weeks ago since he passed several yards. The chief differences between this form & T. solium appear to be as follows. The head is larger, abruptly truncated & lacks the rostellum & consequently the hooklets. This surrounded by dark zone of calcareous corpuscles which form a striking contrast to the white segments of the neck. The segments are broader, thicker & not as long. The generative orifice is a little below the centre

& the lateral branches of the uterus, appear more numerous & closely packed together. I see appears also to be a difference in the shape of the ova in the two species. That in Idenia solum being round, while in I. marginata they are rather oval & somewhat larger

On the fins of chub

21/4/70 In the Rev W. A Johnsons aquarium were noticed several round white spots, these on examination proved to be some sort of Infozoa. In addition to these ~~white spots~~ some yellow spots were seen which seem to be a more advanced condition of the parasite (see Slide)

2/5/70 Numerous flukes attached to the intestine of a small chub. (see slide no)

12/6/70 Examined 3 chub from the intestine of one two Echinorynchus coronoblaneus, a male & female

Entozoa in Pike

23/4/70

In a Pike 2 ft 7 inch long caught at the Island I obtained 68 specimens of Tænia and two or three small ascarides

This tape-worm is about a foot long, ~~very~~ exhibited curious undulatory movements which continued for more than twenty four hours after removal from the intestines. It is very extensible and may be stretched to almost double its ordinary length. The head is flattened, club shaped when the worm is dead but during life is generally extended giving to ~~the~~ it the shape of a flint arrow head. Four suctorial discs are plainly seen but no hooklets. The segments taper very gradually being exceedingly small at the neck, larger towards the end of the body, they are about twice as broad as they are long. The vascular system is not distinctly seen in this worm consisting of four channels, two on each side, at the head and for a considerable distance down the neck these tubes connect by means of inosculating branches, these about the head form a dense net-work (see sketch)

30/4/70 From a pike caught in the canal basin at Dundas. I obtained 28 Tænia and numerous small Ascandæ. In the stomach of this fish were 52 smaller ones, principally little bass & perch

3/6/70

From the intestines of two Pike obtained at the Fish-market Toronto. In one 84 Tænia were found and in the other 53 not counting numerous small undeveloped ones, looked like partly eaten scolices. A few Ascandæ were found in the stomach of one.

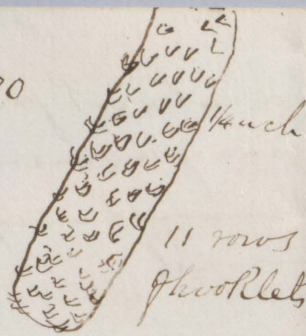
23/6/70 From intestine of a Pike obtained in Fish-market Toronto. 56 Tænia; most of these were of a large size and longer than the usual ones from this fish

Entozoa in ~~Chub~~ Perch

23/4/70 In the liver of a perch taken from the stomach of a Pike (see p. 219) were numerous encysted nematodes (see slide no)

13/5/70 From four Perch caught in the Canal I obtained the following.
a Cysticercus from the liver, the head of which bears a remarkable resemblance to the head of the same of the Pike & most probably is its scolex.
Encysted Nematodes from the liver
Four species of Echinorynchus from the rectum
In the intestine there was a curious Entozoon with a bell-shaped retractile head furnished with small finger like processes. (see sketch slide)
Coiled around the base of the aorta was a large Distome the upper third is outlined in this sketch

9/5/70



From the duodenum of cat, one large worm and two of . . . . . they were from 3/4 to 1 inch in length, moved freely, retracting and pushing out the hooked proboscis, hooklets 11 deep, & 5 or 6 in each row, curved like the barb of a harpoon. The body was filled with ova, enclosed in a tube extending the whole length of the worm. Two constrictions yet near the head but one in the neck of the body

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MONTREAL

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Entozoa in Eel

9/5/70 One solitary tape-worm in the duodenum about four inches long. no generative organs seen, no ova, water-vascular system distinct; no head discovered

Two species of Echinorynchus both females length 3/4 to one inch, moved freely, retracting and pushing out the hooked proboscis. Eleven rows of hooklets, recurved like the barb of a harpoon The two Lemnisci were distinct as also the three or 4 muscular retractors of the proboscis. Cysts containing ova occupied the rest of the body. Two or three slight constrictions noted

12/7/70 Female large silver eel caught at Burlington canal. Alamed one large Distome from stomach

229

Entozoa in Squirrel

12/5/70 Eight small Ascarida from the duodenum of the red Squirrel

23/1/70 **Experiments with Entozoa**

I

Fed two rabbits with mature Proglottides of Taenia elliptica, from Dog No 2, Six segments to each rabbit These will in all probability give negative results as the scolices of Taenia elliptica are not produced in the rabbits

These failed

II

23/2/70

Fed a rabbit with about ℥ ʒiii of Echinococcus flesh from man in whom I found them while dissecting

1/3/70 III

Fed a cat and dog with Echinococcus flesh 3/3/70 repeated the dose to dog

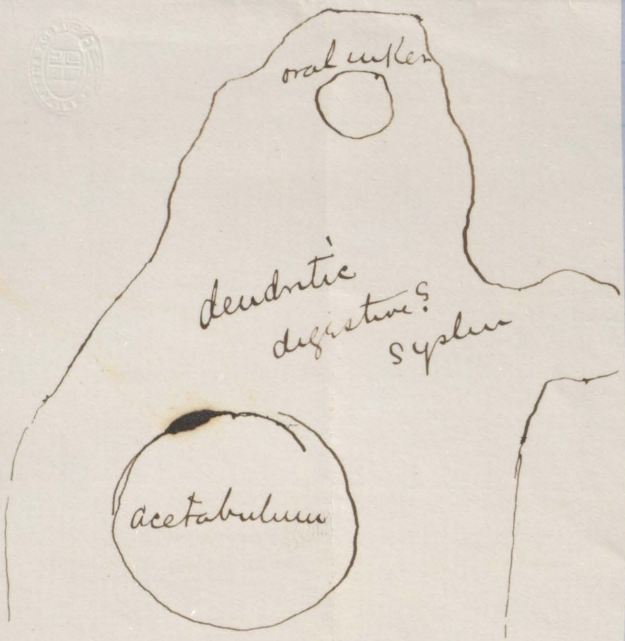
In these cases the juices of the stomach were in all probability not strong enough to dissolve the cyst and free the parasites

IV

30/3/70 Fed a rabbit and a young pup with muscle from Case V. 31st repeated the dose to pup. 1st again.

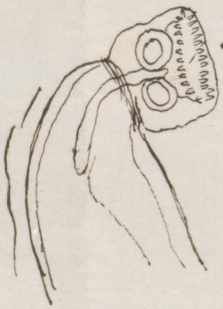
14/4/70 Killed the pup. No traces of Trichinæ; the cyst were probably too dense for the juices of the stomach to dissolve

21/4/70 Killed the rabbit fed with the Trichinous flesh on 30th march. Numerous Trichinæ in a young immature condition were observed in the muscles. Many of them exhibited sluggish movements. They were more numerous in the abdominal and thigh muscles than in any other



out line of the upper third of a fluke taken from the base of the aorta of a perch
cam. lucid. × 1/4 inch

13/5/70



camera
× 1. inch

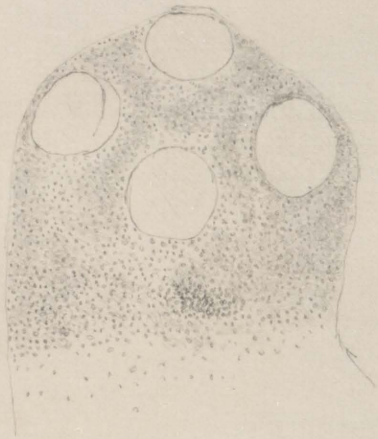
Head of
Gperch. sea chile

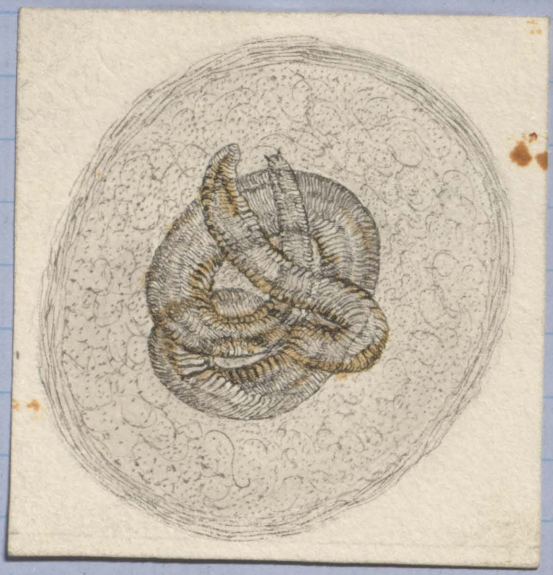
from intestine

15/9/70

Head of Pania from Skinck

Camera Lucid. and 1/8 th Object





Entozoa in Pickerel

3/6/70

From the intestine of a Pickerel in the fish-market I obtained 8 Tænia. This is a comparatively stout Cestode length from 10-12 inches. breadth of posterior segments about 1/4 of an inch. Head square, no neck but a gradual tapering to the head. suckers four, large. no proglottis observed

23/6/70 From Pickerel (1 foot - the half long) in fish-market Toronto. 18 large Tænia were obtained

Entozoa in Menobranchus lateralis

6/6/70

From a specimen of above, caught at the Island I obtained numerous Polystomes, some of which were attached to the branchiæ others to the upper surface of the mouth. This Trematode presents four disks, two at each extremity. Of these the smaller one situated about the middle of the upper fourth of the body, is the mouth, which leads directly into the intestines. These consist of two simple tubes, which unite about the middle of the lower fourth of the body. The water vascular system is well developed. It appears to commence in a ramification of vessels about the anterior disk, these unite to form two vessels, which run the whole length of the body, join below and open somewhere between the posterior disks. Cilia are to be seen distinctly in the water vascular system, especially at the junction of the tubes below. At the upper third of the body on a level with the generative opening, on each side is seen a curious pulsating organ, which is undoubtedly connected with the water vascular system. The pulsation occurs about once every minute & a half. The external generative orifice is seen a little below the

the oral disk, this leads into a narrow slightly curved vagina. The ova occupy the general cavity of the body between the digestive tubes. A bundle of spicules (Penis?) are to be seen close to the vulva. Close to the caudal disk two large hooks are placed. These hooks are bifurcate and to one extremity a band of fibres is attached. Besides these numerous small hooklets are to be seen scattered down the posterior disks. The attached extremity of these is trifurcate

Entozoa in Skunk

15/6/70

From a large male skunk. About 30 Taenia and 14 Ascaridae. Numerous small cysts were ~~found~~ observed in the liver & spleen, but nothing found in them. The Tape worms are small from ½ an inch to 2 inches in length broad in proportion ~~to their length~~, exhibiting very slight movements. A slight enlargement seems to exist about the neck, which disappears when the worms is much elongated, the segments seem but loosely joined together breaking very easily. Four larger sucking disks exist at the head, no hooklets seen. The calcareous corpuscles are more numerous in this cestode than in any I have yet examined. The water-vascular system is not easily seen on account of the dense layer of Calc. corpuscles

The Ascaridae are from 3/4 – 1 inch in length. They are freely. Most of them were in the stomach not in the intestines

Entozoa in Sun-fish

4/7/70

Examined 10 Sun-fish caught in the Canal; in all numerous Distomes were found. This fluke is probably in an immature condition, being encysted and not having its internal organs completely developed. The heart, liver & Kidneys presented a woolled appearance from the numbers in them they seemed only to be attached to the heart; while in the liver & Kidneys they occupied the substance of those organs,

Encysted Nematodes were found in one liver and what appeared to me the scolex of one of the Echinorhynchidæ, in an other.
In the rectum of two, a few Echinorynchidæ were found

Entozoa in King-fisher

1/7/70

Examined one of these birds and much to my surprise found no Entozoa in it

13/8/70

Shot a Kingfisher: a few small Distomes were found in the liver. The small fish which constitute the food of this bird seem not to share the common fate of fish, in as much as few mature or immature Entozoons are found in them

Entozoa in Black-Squirrel

1/7/70

Examined a large male animal. No entozoa in them

Entozoa in Bass

7/7/70

Examined a large Black Bass caught in Burlington Bay, a solitary scolex of some tape worm was found in the peritoneal cavity

Entozoa in Hawk

13/8/70

Shot a Hawk; a single large Ascaris found in the duodenum

Entozoa in Crane

15/8/70

Entozoa in Fowl (Gallus ~~Bankiva~~)

9/9/70 Examined the intestines of three fowls. one a two year old Rooster the others, this year chickens. In the duodenum of the Rooster numerous Tænia, from 2-6 inches long were found; in the younger fowls a few smaller ones of the same kind occured The smaller ones were deeply imbedded in the mucous membrane the larger ones not at all so

4/1/71

Examined intestines of two fowls. found in one numerous Tænia same kind as above, and one Distoma about half an inch long & 2 lines thick, very large posterior sucking disk. The fowl has been frozen so that the worms were dead & had begun to disintegrate In the other a few small Tænia only were found

The generative organs in this species open by an orifice of considerable size along one margin only of the worm. The opening is more at the junction of the segments than at the centre

6/11/71 Examined two fowls. One large ascaris only found. The fowls were grain fed

Entozoa in Dory

22/10/70 Examined a dory in Montreal fish market. One small tape worm, one Bothriocephalus and about two dozen small Echinorynchidæ were found. The Bothriocephalus occupied the entire cavity of one of the numerous cæca given off at the pylorus, the Tænia was in the duodenum & the Echinorynchidæ more towards the rectum. This fish I find is the Pickerel

see p 260

Entozoa in Bar-fish

1/11/70 Examined one of the above named fish, and found in the peritoneal cavity some half dozen Nematode worms. Each worm is about half a line in thickness and from three to four inches in length, dark in colour, annulated towards the anterior extremity, which is blunted and thick, the posterior extremity is pointed & presents the vaginal & rectal orifices. The ovaries extend the whole length of the body

10/11/70

Found more of the same kind in the peritoneal cavity, particularly about the rectum, nothing in the intestines

Entozoa in Cat

3/1/71

Examined intestines of cat, found one Ascaris mystax (?) and one Taenia

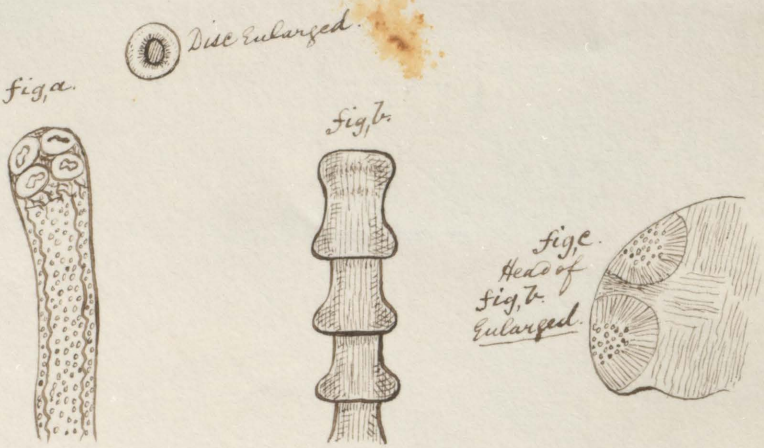
Entozoa in Lynx

5/3/71 Examined the intestines of an animal obtained by the Nat Hist Society of Montreal. In the duodenum were ascaridæ & tones down in the bowel 25 - Jamie. The animal had been dead a long time & the intestines had been thrown out & exposed to the cold for two nights. One greater part of a racoon was found in a semi-digested state in the stomach. The other organs were not examined

Entozoa in Rat

8/3/71

From a rat obtained at Montreal General Hospital I obtained 5 Taenia. They were situated low down in the intestines, approaching the faecalent matter. This is a small, fine species. 2 1/2 to 3 inches in length. Head very small no hooklets seen. The vascular system is very distinct



Tape worm from intestine of Beaver Fish, (Amia calva).
magnified.
A. H. Foord, del.

Fish examined with negative results

1/11/70

Examined two small Sturgeons. Contents of stomach, numerous larvæ of all kinds, principally those of the Libellula. Examined a large Sucker, stomach contained small water worms and larvæ

10/11/70. A good sized Sturgeon, two Muscheluge, a Mullet & a Pickerel